ENVIRONMENTAL DEFENSE
finding the ways that work

May 9, 2008

Mr. Phil Isenberg, Chair
Delta Vision Blue Ribbon Task Force
Delta Vision
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Sacramento, CA 95814

I am attaching Environmental Defense Fund's *Vision for Environmental Reliability* for review and consideration by the Delta Vision Task Force. This submission supplements comments that EDF is submitting in conjunction with other environmental organizations.

The Environmental Reliability Vision is focused on six key elements that EDF believes are necessary to ensure that we achieve the goal of long-term environmental health which is the foundation for water supply reliability for California. This paper is responsive to the topic areas for which you have requested comment.

Sincerely,

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A Vision for Environmental Reliability

MAY 9, 2008

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Our mission
Environmental Defense Fund is dedicated to protecting the environmental rights of all people, including the right to clean air, clean water, healthy food and flourishing ecosystems. Guided by science, we work to create practical solutions that win lasting political, economic and social support because they are nonpartisan, cost-effective and fair.

The complete report is available at www.edf.org/

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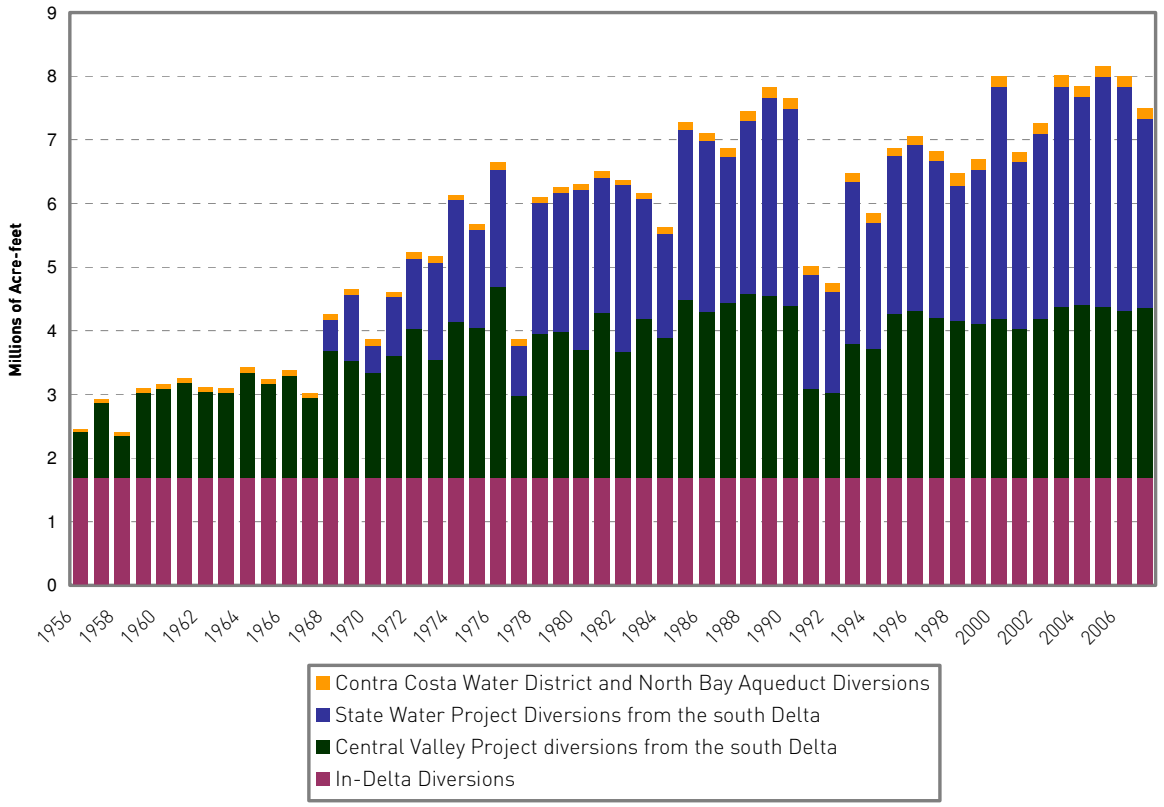
***"Insanity can be defined as doing the same thing over and over again and expecting a different result."* -- Albert Einstein (attributed)**

For decades, California has struggled to protect its native fish while providing ever more water for agriculture and cities. We have periodically reached crises so severe that the courts have had to order the state and federal governments to list salmon and other fish under endangered species laws, and to issue ever more stringent water quality standards. Most recently the courts have had to step in to limit pumping of water out of the San Francisco Bay Delta Estuary (Bay-Delta) to protect listed species. And while each crisis spawns a new effort to address the problem – new funding to be spent, and new research to be conducted – the cycle invariably repeats itself and the downward spiral of the Bay-Delta ecosystem has continued more or less unabated, tracked by the downward spiral of California's once flourishing fishing industry.

Strikingly, California has continued to take more water out of the ecosystem while attempting to restore its fisheries. As the Delta Vision report demonstrates, more and more fresh water has been diverted out of the Bay-Delta over time. Looking at the period from the mid-1990s to the present – when the most stringent environmental requirements have been in place – it is clear that water diversions have actually **increased**, as shown below in Figure 1.

FIGURE 1
Historic Diversions from the Delta

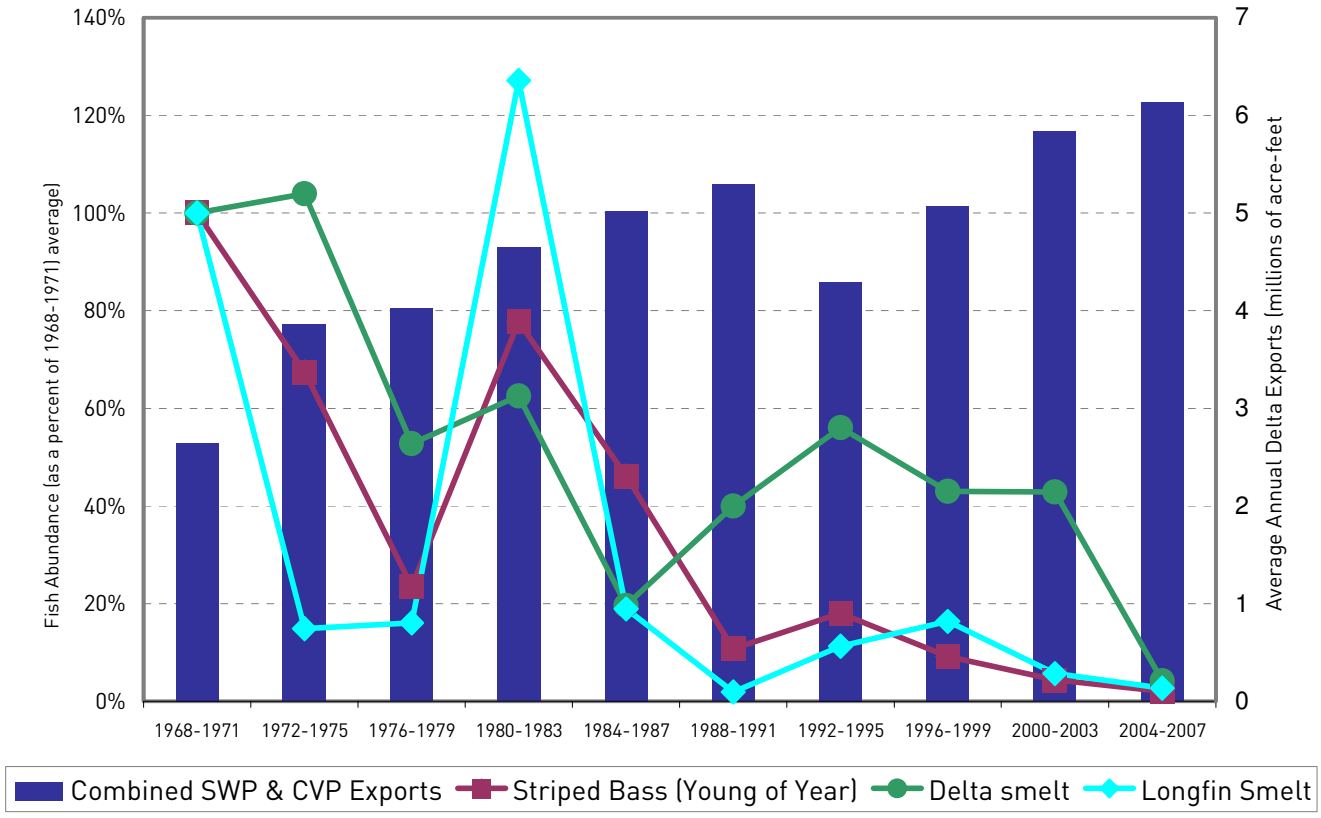


In spite of additional operating criteria to protect fisheries including the Central Valley Project Improvement Act (1992), the Water Quality Control Plan (1995) and the Calfed Environmental Water Account (2000), diversions from the Delta have reached record levels in recent years.

Source: California Data Exchange Center (also used in Delta Vision report)

Despite enactment of the Central Valley Project Improvement Act (CVPIA), adoption of the Bay-Delta Accord, the Calfed Environmental Water Account and other recent environmental restoration efforts – little additional water has actually been provided for the benefit of the Central Valley and Delta fisheries[1]. Coincident with the increase in federal and state water project exports we have seen the crash of Delta fisheries.

FIGURE 2
Historic Delta Exports and selected in-Delta Fish Populations



The abundance of some in-Delta species has plummeted in recent years as exports have increased.
Source: CDEC and CDFG Midwater Trawl Data

Figure 2 shows that combined water project exports have increased during the years since the Bay-Delta Accord was signed and the enormous CVPIA and Calfed restoration efforts have been underway. This is not to say that some water users have not experienced substantial cutbacks in water deliveries – they have – but overall more, not less, water has been taken out of the ecosystem over time.

[1] See, EDF, Finding the Water: New Water Supply Opportunities to Revive The San Francisco Bay-Delta Ecosystem (2005).

We agree with leading scientists that many factors including chemical pollutants and invasive species have contributed to the decline of salmon and Delta fisheries. However, the time has come to recognize that continuing to take more and more water out of streams and rivers is not compatible with the often heralded goals of "protecting and restoring the Delta" or "improving the ecological health of the Delta" or "establishing a sustainable Delta." Providing more water for the environment will not alone solve the Delta's ecological problems. But failing substantially to increase water for this depleted ecosystem would be an exercise in doing the same thing over and over again and somehow expecting a different result.

The Delta's survival as an ecosystem, and as a key element in the State's water delivery system, requires that we make bold changes in the way it is managed. The long cycle of conflict and uncertainty has proved devastating and expensive for both the environment and water suppliers. The past few decades have shown that water supply reliability cannot be ensured without ensuring environmental reliability.

The purpose of this paper is to provide EDF's environmental reliability vision for policy makers and others engaged in California's water future. In our view, the six elements discussed below are necessary components of any successful effort to achieve ecological health in the Bay-Delta, the revival of California's once-famed salmon fishery and water supply reliability for much of the State. Our premise is that restoration efforts must actually result in long-term, resilient, self-sustaining fisheries and ecosystems. For many years, and in many venues, official statements have asserted the need for ecosystem health, but restoration efforts have fallen far short of even modest goals. Not surprisingly, fishery crises have deepened and water supplies have been vulnerable to the interventions necessary to address these crises.

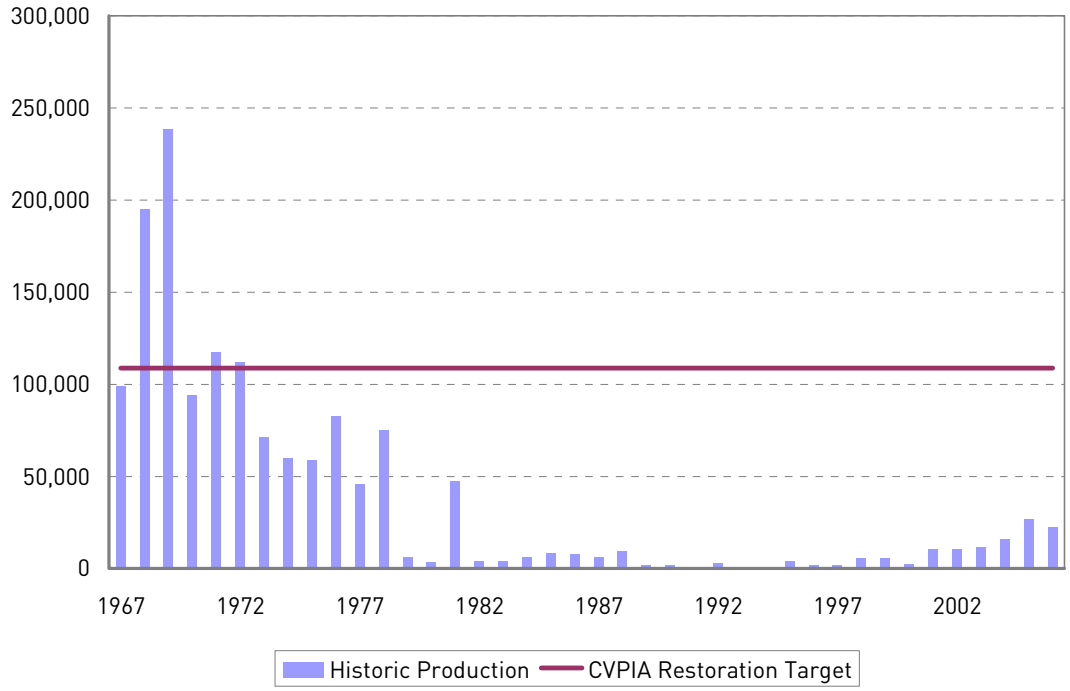
With the implementation of sound environmental and water supply policies, there is sufficient water in California to ensure a healthy and growing future for the State's cities and farms alongside its fisheries and fishing industries.[2] Environmental reliability can be the guarantor of water supply reliability.

The Environmental Reliability and Water Supply Reliability Link

Most observers of California water issues are beginning to acknowledge that reliable water supplies require a healthy, self-sustaining ecosystem. The Bay-Delta Estuary exemplifies this relationship. Dramatic re-engineering of Central Valley rivers and streams enabling diversions of large quantities of freshwater, in addition to pesticide runoff, invasive species and other factors have devastated the ecological health of the estuary and led to serious declines in fish populations. These declines predictably have led to massive declines in California's commercial fishing industry, as shown in Figures 3 and 4.

[2] See, Public Policy Institute of California, Envisioning Futures for the Sacramento-San Joaquin Delta (2007); see also Pacific Institute, California Water 2030: An Efficient Future (Sept.2005).

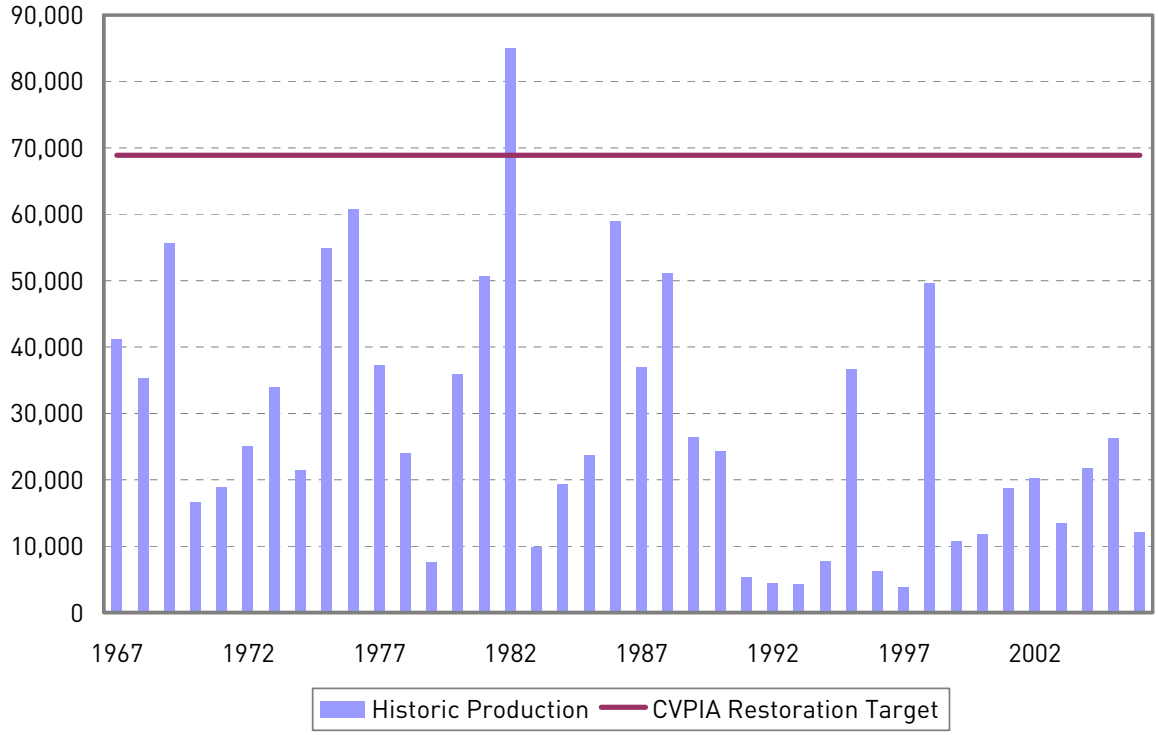
FIGURE 3
Winter-Run—Naturally Produced Central Valley Chinook Salmon



Winter-run chinook were listed as *endangered* under the state ESA in 1989 and the federal ESA in 1994.

Source:California Department of Fish and Game Midwater Trawl

FIGURE 4
Spring-Run—Naturally Produced Central Valley Chinook Salmon



Spring-run chinook were listed as *threatened* under both the state and federal endangered species acts in 1999.
Source: California Department of Fish and Game Midwater Trawl

As the State Water Project (SWP) and Central Valley Project (CVP) began to take a toll on the ecosystem, the Projects found themselves in regular conflict with state and federal laws adopted over time to preserve and protect the environment. Meeting water quality standards meant that the SWP and CVP had to release more freshwater flows into the Delta to keep in check the Bay's eastward saltwater creep. Diversions had to be modified in a piecemeal attempt to keep particular fish species from going extinct. In 1992, in response to mounting environmental problems, Congress amended the reclamation law governing the CVP and imposed additional requirements on federal water users. The end result of these efforts to limit environmental harm has rendered water supplies, particularly those of the most junior water contractors and rights holders, less reliable.

The safety nets provided by federal and state environmental laws, as enforced by the courts, have been somewhat effective in preventing extinctions. However, these laws were not designed – and they have not been able – to achieve lasting ecological health in the estuary. Until this is achieved, the recurring fish crises of recent years will almost certainly continue, indeed they will likely deepen, and water supplies for cities and agriculture dependent upon the Delta will remain vulnerable.

Elements of Environmental Reliability

The time is long overdue to achieve ecological health in the Bay-Delta Estuary. Learning from the failed efforts of the past, Environmental Defense Fund believes that restoration efforts at the level necessary to achieve environmental reliability will need to include each of the 6 policy elements outlined below.

1. FRESHWATER FLOWS FOR FISH

The science is clear that additional freshwater flows are a necessary, if not sufficient, condition to achieving lasting ecological health for California's fisheries and the Bay Delta watershed. Quantified levels of flow plus a substantial 'risk-cushion' should be established for the watershed for various water year types. [3] The amount and timing of water for the environment should be designed to fulfill the State's duty under the public trust doctrine to protect fish and habitat. Flows should be specifically geared to the achievement of the following goal:

Self-sustaining fisheries and habitat over the next 100 years capable of withstanding uncertainties involving global climate change.

The State Water Resources Control Board (State Board) is the primary agency that serves as trustee for public trust resources. As such, the State Board is the appropriate agency to determine the water flow and other biological requirements for the trust resources of the Bay-Delta watershed. The State Board should be directed to prepare an assessment of the water flows needed to achieve the goal above. This assessment should include flows upstream as well as through the Delta itself.

Substantial work has been done to identify freshwater flows necessary for long-term ecological sustainability in the Bay-Delta watershed. [4] In addition, this issue is being revisited in the Delta Vision process. The State Board should be directed to build upon these efforts.

Once the State Board has established the biological requirements for the fish, habitat and other public trust resources of the Bay-Delta watershed, these flow requirements – plus an appropriate buffer to accommodate change and other uncertainties – should be formally adopted by the State as enforceable mandates.

2. SECURE MONEY

Secure funding is critical for restoration efforts because such efforts require support over long periods of time. General appropriations subject to the vagaries of state and federal budgets, are politically vulnerable and, as demonstrated in Calfed and other restoration efforts, when unavailable can hamper the best of plans. A variety of funding mechanisms are possible including user fees, revolving funds, and dedicated accounts.

Failure of anticipated funding to materialize for whatever reason should trigger non-discretionary changes in diversions as discussed below.

3. ENFORCEABLE MANDATES

Achieving the ecological goal described above will require performance measures that are specific and measurable so that all parties will know when "success" is, or is not, achieved. These measures should be

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[3] See, Owen, Dave, Law, Environmental Dynamism, Reliability: The Rise and Fall of CALFED, Lewis and Clark Environmental Law Review, Issue 37:4.

[4] See, CVPIA Working Paper (1995); Calfed Ecosystem Restoration Plan (2000).

stated as legally enforceable mandates that require success by a date certain, and that have consequences if they are not met. In the Delta Vision process, for example, performance measures under consideration should define success as the restoration of particular native fish population levels to those last experienced over a specific historic period.

Some restoration mandates along these lines already exist, most notably the salmon doubling standard enshrined in California's Salmon, Steelhead Trout, and Anadromous Fisheries Program Act of 1990, the 1992 CVPIA, and the 1995 Water Quality Control Plan. While each of these programs has made progress and produced important work, California is still far short of achieving the salmon doubling objective. Indeed, salmon populations have declined so precipitously that the entire fishery has been shut down this year. Moreover, other than the protections afforded by endangered species laws, there are no mandates or performance measures yet in place for in-Delta fisheries such as smelt, sturgeon or splittail.

The Delta Vision process may produce the performance measures needed to achieve the goal above. If the Delta Vision process is not able to do so, this task should be delegated to a panel of impartial, highly qualified biologists using a process similar to the one used by the San Francisco Estuary Project in the 1990s to break the impasse over Bay-Delta salinity standards.[5]

Once the performance measures are identified, they should be codified by the State legislature. These measures should be binding on all operations and facilities affecting the Delta watershed.

4. NEW MANAGEMENT APPROACHES

In addition to establishing flow levels needed to meet ecological goals, innovations are needed to ensure that water intended to benefit fish and the overall health of the Bay Delta ecosystem is actually made available where and when it is required. To date, the Department of Water Resources has taken the lead in buying water for fish, but its purchases have obviously not been sufficient to achieve the objectives set out in state and federal law. Additional tools to provide reliable sources of water for environmental purposes include but are not limited to:

- Establishment of a new state water right allowing for the "appropriation" of water for fish and other environmental purposes.
- Establishment of a new operational regime for the state and federal water projects elevating attainment of the ecological objectives on par with other responsibilities.
- Move responsibility for the state and/or federal water projects to a new entity with co-equal responsibility for water supply reliability and environmental reliability.
- Creating real economic incentives for water conservation and water transfers.

5. ACCOUNTABILITY

A key problem with restoration efforts in the Bay-Delta and elsewhere has been that there are few if any consequences for failing to reach restoration goals until crisis points are reached and endangered species laws are triggered. A bedrock element of environmental reliability is therefore provision for automatic, non-discretionary changes in water project operations and other diversions in the event that the program elements above – such as water or money – do not materialize or the performance measures are not achieved by established deadlines.

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[5] See Managing Freshwater Discharge to the San Francisco Bay/Sacramento-San Joaquin Delta Estuary: The Scientific Basis for An Estuarine Standard, (SFEP 1993).

This recommendation assumes that – just as the Calfed Record of Decision provided – Delta Vision, BDCP or other process will assert an objective of providing to water users some level of "regulatory relief" from state and federal endangered species obligations. The purpose of this environmental reliability tool is to ensure that if the restoration effort goes astray or fails to meet its targets, water diversions throughout the system are automatically changed until the restoration effort is back on track. This tool also represents an effort to share both the burden and the investment in the restoration program throughout the diverse community of water users.

The non-discretionary nature of this tool is intended to provide the incentive necessary to ensure that environmental recovery is viewed as a full partner in the water supply system. Similarly, ESA-related promises to continue with "covered" activities in the event that environmental assurances are not met should be automatically suspended in the event that performance measures are not achieved.

The focus on attaining environmental reliability should not be on which activities are "at fault." Rather efforts should focus on those actions most likely to support achievement of the mandated goals with the understanding that some factors – such as changing ocean conditions – are beyond the reasonable reach of any near-term restoration efforts.

There is substantial precedent for this approach in the context of the ocean fishery: few if any biologists maintain that the highly regulated ocean harvest is primarily "at fault" for the dramatic decline in salmon populations. Nevertheless, there is virtual unanimity among those same biologists that closing down the ocean harvest is the best way to avoid further harm to these fish. The analogy is appropriate in the watershed where these fish come from as well.

6. LEGAL SAFETY NETS

Citizen suit provisions should be included in any comprehensive Delta Plan to ensure rights of access to courts to enforce environmental promises. In addition, continued rights to seek redress under existing law, such as state and federal endangered species acts, the public trust and reasonable use doctrines, and Fish and Game Code Section 5937, to cite just a few examples, should remain intact.

Conclusion

For many years water users have maintained that supply reliability is essential for the continued economic vitality of their industries and the State. EDF believes that this is a legitimate position. By the same token, environmental reliability is critical if we are to move beyond assertions about the need for sustainable fisheries and toward achievement of this goal. Water supplies will remain vulnerable as long as the environment remains at the brink of disaster. As discussed above, respected analysts are demonstrating that California has enough water for its farms, cities and salmon. We believe that the six elements above constitute the necessary foundation for lasting ecological health, and with this, a lasting and vital water supply for Californians.

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